

Title (en)
CENTRIFUGAL PUMP

Title (de)
ZENTRIFUGAL-PUMPE

Title (fr)
POMPE CENTRIFUGE

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Application
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Abstract (en)
[origin: WO2005003565A1] The invention relates to a centrifugal pump, especially for blood, comprising a pump rotor (14) which is arranged in a rotational manner and without a bearing in a liquid-tight and gas-tight closed housing (11), except for at least one inlet opening and at least one outlet opening (12, 13). Said rotor is also the rotor of a drive motor. Said rotor (14) is symmetrical with respect to the centre plane thereof and comprises an upper and a lower covering (16, 17). The rotor (14) and/or the pump housing (11) are formed in such a way that the axial distances between the upper and the lower coverings (16, 17) and the upper and lower housing walls are smaller in the radially inner region of the rotor (14) than in the radially outer region. In the radially inner region of the rotor (14), each lateral rotor chamber (26, 26', 27, 27') comprises a flow-restrictor gap (116, 117) which, when in operation, influences back flows oriented in a radially inward manner in the lateral rotor chambers (26, 26', 27, 27'), such that during an axial deflection of the rotor (14) above and below said rotor (14), various pressure distributions appear, enabling forces acting upon the predominant surface of the coverings (16, 16', 17, 17') to be produced, said forces bringing about an axial stabilisation of the rotor (14) and acting, in the same manner, against tilting of the rotor (14) inside the housing (11).

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